

Application/Control Number: 09/864,870

Page 2

Art Unit: ***

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Art Unit: ***

1. A method of operating a packet switch which comprises a plurality of ingress means, a plurality of egress means, a cross-bar and a controller, the cross-bar being connected between the ingress means and the egress means to transfer multicast and unicast data traffic from the ingress means to the egress means, the method comprising the steps of:-

- a) determining if the data traffic to be transferred is unicast or multicast;
- b) if the data traffic is unicast, invoking a unicast schedule;
- c) if the traffic is multicast, invoking a multicast schedule; and
- d) transferring the data traffic in accordance with the invoked schedule.

2. A method according to claim 1, wherein step c) comprises forming a multicast cell fanout table containing current fanout requirements for a cell at the head of a multicast queue in each ingress means.

3. A method according to claim 2, wherein step c) further comprises setting eligible bits for multicast cells which are currently allowed to be scheduled.

4. A method according to claim 3, step c) further comprises determining a priority for each ingress means for sending the cells.

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Art Unit: ***

5. A method according to claim 4, wherein the step of determining the priority for each ingress means is based on the combination of send opportunities.

6. (Amended) A method according to claim 4, further comprising the step of e) filling a blank multicast schedule in accordance with the priority assigned to each ingress means.

7. A method according to claim 6, wherein step e) comprises the step of:-
(i) filling the blank schedule with the full fanout of the first priority ingress means.

8. A method according to claim 7, wherein step e) further comprises the step of:-

(ii) filling in as much of the fanout of the next priority ingress means and subsequent ingress means as possible to complete the schedule.

9. A method according to claim 8, wherein step (ii) comprises selecting fanouts of ingress means in accordance with multicast egress credit allocated to each egress means.

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